Scale postural-instability–gait-difficulty (MDS-PIGD) score, and self-perceived balance confidence level documented by the Activities-specific Balance Confidence (ABC) Scale.
Results: A significant group × time interaction was found for all outcomes using a two-way repeated measures analysis of variance. Immediately after training and at 2-month follow-up, only the EXP group exhibited significant increases in mini-BESTest scores (mean differences = +11.4% and +12.6%, respectively; $p < 0.001$) and ABC scores (mean differences = +6.8% and +6.4%, respectively; $p < 0.01$), and a decrease in MDS-PIGD score (mean difference = −1.7 and −1.5, respectively; $p < 0.001$). At 6-month follow-up, only the EXP group showed a significant increase in mini-BESTest scores (mean difference= +11.0%; $p < 0.001$) and decrease in MDS-PIGD score (mean difference = −1.6; $p < 0.001$). Between-group comparisons indicated that the changes of mini-BESTest scores were significantly larger in the EXP group at post-training and both follow-ups.
Conclusion: Our programme enhanced balance performance and balance confidence in people with PD at post-training and 2-month follow-up. The benefits on balance performance could be carried over to the 6-month follow-up.

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Implementation of a breathlessness management programme with an incentive handheld fan as a nonpharmacological approach in dyspnoea management in patients with advanced chronic obstructive pulmonary disease and chronic heart failure

C.H. Wong, MSocSc[a], H.W.A. Ching, MSc[a], W.Y. Chan, BSc[a], W.T. Chen, MBBS[b], Y.H.P. Poon, MSc[a]
[a]*Physiotherapy Department, Tuen Mun Hospital, Hong Kong*
[b]*Department of Medicine and Geriatrics, Tuen Mun Hospital, Hong Kong*

Background and purpose: Most patients with chronic obstructive pulmonary disease (COPD) and chronic heart failure (CHF) experience breathlessness. An incentive handheld fan (IHF) has proved its complementary role for the ambulatory COPD and CHF patients with breathlessness in the United Kingdom (UK). It produces a flow of air that may alter ventilation when directed to the face, nasal mucosa, or pharynx, thereby reducing breathlessness in patients. In Hong Kong, many patients with advanced COPD and CHF are admitted to hospital due to severe breathlessness resulting in functional limitation and increased medical expenses. Thus, a breathlessness management programme with an IHF has been implemented since October 2011, aiming at reducing the breathlessness-induced limitations in functional activity and the patients' coping stress during acute exacerbation of severe breathlessness that required hospitalisation. The aim of this study was to analyse the effectiveness of the breathlessness programme with an IHF for advanced COPD and CHF patients with severe breathlessness and low functional mobility during hospitalisation.
Methods: Advanced COPD or CHF patients with an exercise level of lower than two METs who were admitted to hospital due to severe breathlessness were recruited into this programme. This programme included 10 minutes of IHF therapy and education of breathing techniques for controlling breathlessness. Physiotherapy assessment on the respiratory rate, oxygen saturation, pulse rate, and the dyspnoea numeric rating scale scores (0–10) was conducted prior to and after the IHF therapy. The 2 METs physical endurance exercise test was also performed for the measurement of exercise endurance level. Patients were encouraged to continue the IHF therapy and breathing control during the hospitalisation period.
Results: Eighty patients were recruited from October 2011 to May 2013. Respiratory rate was decreased from 32 ± 5/min to 28 ± 4/min ($p < 0.001$). Pulse rate was reduced from 94 ± 9/min to 86 ± 9/min ($p < 0.001$), and dyspnoea numeric rating scale score was reduced from 5 ± 0.5 to 2 ± 1.0 ($p < 0.001$). Patients did not report any discomfort. All patients were not able to complete two METs physical exercise prior to the programme. However, 70% of patients were able to complete two METs physical exercise demonstrating an improvement in exercise endurance level after this programme despite the fact that oxygen saturation was not optimised significantly (from 95 ± 2% to 96 ± 2%; $p > 0.1$).
Conclusion: The breathlessness management programme with the use of IHF therapy and breathing control technique provides an easy, safe, and inexpensive management option in patients with advanced COPD and CHF experiencing severe breathlessness that required hospitalisation. More studies with a larger sample size and randomised control trials are recommended to explore further the effectiveness of BMP with the use of IHF therapy and breathing control in advanced COPD and CHF patients with severe breathlessness.

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Effectiveness of a structured physical rehabilitation programme for a Chinese population with depressive disorders

P.Y.K. Lo, MHSc[a], P.M.Y. Lau, DHSc[a], R.M.W. Chau, DHSc[a], R.M.K. Ng, MSc[b], A.W.K. Tsang, MBBS[b], K.M. Ng, MSSc[b], C.T. Chan, MBBS[b], M.M.Y. Lam, MSSc[a], F.L.W. Tang, MSSc[a], P.W.L. Lau, MSc[a]
[a]*Physiotherapy Department, Kowloon Hospital, Hong Kong*
[b]*Department of Psychiatry, Kowloon Hospital, Hong Kong*

Background and purpose: Exercise was found to be effective in the management of depressive disorders among Western populations. The aim of this study was to investigate the effectiveness of a structured physical rehabilitation programme in improving physical fitness and negative psychological symptoms for a Chinese population with depressive disorders.
Methods: Seventy-two Chinese adults with depressive disorders were recruited from Kowloon Hospital with random allocation into two groups: (1) intervention group and (2) waitlist control group. Physical and mental outcome measures included body fat percentage, maximum hand-grip and quadriceps power, sit-and-reach test, 1-minute sit-up count, maximal oxygen consumption (VO_{2max}), Hamilton Depression Rating Scale, and Depression, Anxiety, Stress Scale (DASS-21). Postintervention satisfaction questionnaire on the programme was also conducted. Within-group difference was analysed by Wilcoxon signed ranks test, and Mann–Whitney *U* test was used for between-group comparison after 12 weeks.
Results: Preliminary data on the first 53 patients (intervention $n = 28$, control $n = 25$) with a mean age of 48.26 ± 10.13 years completed the programme. Baseline characteristics between these two groups were comparable. Significant within-group improvement was found in the intervention group (all $p < 0.05$), whereas no significant change was observed in the control group. For between-group comparison, the intervention group showed significantly greater improvement when compared with the control group, in all outcome parameters (all $p < 0.05$).
Conclusion: Despite cultural differences in symptom manifestation, a structured physical rehabilitation programme delivered by physiotherapists was effective in alleviating both physical and psychological symptoms in depression rehabilitation. Preliminary results supported local validation of the structured physical rehabilitation programme as an effective intervention in the management of Chinese patients with depressive disorders.

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Pilot upper limb rehabilitation programme for stroke patients utilising transcranial direct current stimulation

K.H. Wong, MSc[a], L.O.L. Ho, MMedSc[a], B.L.C. Wong, MSc[a], B.P.W. Lai, BSc[a], P.Y.H. Poon, MSc[a], M.K.Y. Mak, PhD[b]
[a]*Physiotherapy Department, Tuen Mun Hospital, Hong Kong*
[b]*Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, Hong Kong*

Background and purpose: Recent evidences suggested that a noninvasive brain stimulation technique—transcranial direct current stimulation (tDCS)—can enhance upper limb functional recovery in stroke patients. The objectives of this programme were as follows: (1) to develop an integrated upper limb rehabilitation programme for stroke patients utilising tDCS and (2) to study the effect and feasibility of using tDCS on upper limb rehabilitation in stroke patients.
Methods: Seven stroke patients (4 females and 3 males) were recruited for the integrated upper limb rehabilitation programme. This programme provided five consecutive sessions of tDCS and the patients simultaneously received intensive physiotherapy upper limb functional training. Anodal stimulation by tDCS was conducted to the hand area of primary motor cortex, whereas cathodal stimulation was conducted to the contralateral supraorbital area. Each patient received 1 mA tDCS for 20 minutes. The Wolf Motor Function Test (WMFT) was used as an outcome measure. Assessments were performed prior to the first session and after the last session of treatment. Wilcoxon signed ranks test was used for statistical testing.